

Date: Monday, 15/12/2008 9:14:51 AM  
 User: Linda Lacelle

## Process Sheet

Split

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : STEP WELDMENT  
 Job Number : 44065 -2 Part Number : D3562042  
 Estimate Number : 12577 Drawing Number : D3562 REV E  
 P.O. Number : Project Number : N/A  
 This Issue : 15/12/2008 S.O. No. : Drawing Revision : E  
 Prsht Rev. : NC Material :  
 First Issue : / / Type : LARGE FAB ASSY Due Date : 22/12/2008 Qty: 2/3 Um: Each  
 Previous Run : 43513  
 Written By :  
 Checked & Approved By :  
 Comment :  
 Est Rev: A New Issue 06-11-09 JLM  
 Est rev: B ECN 987 07.10.09 EC verified by: DD  
 Est Rev: C ECN1048 07-12-18 DD verified by: EC  
 Est Rev: D 08-07-28 add chemical conversion coat DD  
 verified by: EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D2622120C Step Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 3.0000 Each(s)  
 Qty Part # Description Batch:  
 1 D2622-120C Extrusion 842155

Check Material for any Dents or Defects

84 08.12.15 3

2.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622 extrusion as per Dwg D3562

2-Deburr and bevel ends for welding

84 08.12.15 3

84 08.12.15 3

3.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

50012/15 (83)

4.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

84 08.12.15 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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Drawing Name: STEP WELDMENT

Job Number: 44065

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-12-15 (X2)

6.0

D3560042

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total: 3.0000 Each(s)

ARM WELDMENT

Batch: B42 369 (3)

SAD 09-01-07 (2)

7.0

D3560044

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total: 3.0000 Each(s)

ARM WELDMENT

Batch: B42 288 (2)

SAD 09-01-07 (2)

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 32.0000 Each(s)/Unit Total: 96.0000 Each(s)

Blind Rivet

batch: M110427

SAD 09-01-14 (2)

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Drill Rivet holes as per dwg D3562. Touch up alodine

→ SAD 09-01-07

2- Rivet legs using Magnabond as per dwg D3562.

\*\*\*\*\*Ensure to wipe off any excess magnabond \*\*\*\*\*

A/R Magnabond 6398 Batch: M1108966

SAD 09-01-14 (2)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/01/16 x2 (2)

11.0

D2734

Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total: 6.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D2734

End Cap

B43535

SAD 09-01-19 2

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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## Process Sheet

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Job Number: 44065

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description:

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R Aluminum Rod M108031

2-Grind end cap welds flush as per Dwg D3562

*Handwritten:* 09.01.19 (770)  
09.01.19

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*Handwritten:* PD 9-1-20

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*Handwritten:* 506/20 (2)

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*Handwritten:* pressure wash

*Handwritten:* 09-01-20

*Handwritten:* (2)

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

*Handwritten:* M109996

*Handwritten:* start time: 2:0  
End: 3:20  
2:40

*Handwritten:* 09/01/20

*Handwritten:* (2)

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch: M109917

*Handwritten:* 09-01-21

*Handwritten:* (2)

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION













Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*Handwritten:* 09/01/22 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3562-042 PAR #: N/A Fault Category: Prod / Ins. / Ig. NCR: Yes No DQA: H Date: 09/02/02  
 Resolution: re-work Disposition: re-work QA: N/C Closed: H Date: 09/02/03

NCR: <u>44065</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09-01-19	12.0	some debris inside of step. RC Lack of Attention when cleaning. Magnabond		Drill hole take out and weld hole shut, per QSI 004, i. grind weld flush.	 09-01-19	 09/01/20	 09/01/20	 09/01/20
		(A tiny piece, <del>was</del> fell off of one of the rivets after welding ASS'y. Lack of attention when cleaning & inspecting.	 02/11/12			 09/01-20	 02/11/12	 09-01-28

NOTE: Date & initial all entries



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Job Number: 44065

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Assembly Kit

G-A

09/01/22 (2)

20.0

QC21

FINAL INSPECTION W/O RELEASE



09/01/26 AG

Comment: FINAL INSPECTION W/O RELEASE

Job Completion



U 09.01.22

D3562-1, MAKE FROM EXTRUSION D2622

2) APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

D3560-043 ARM WELDMENT

D3560-041 ARM WELDMENT

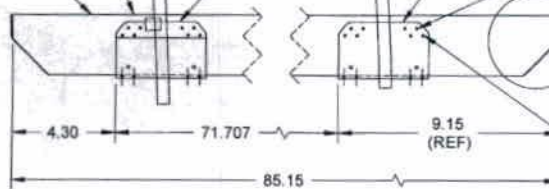
TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING (32 PLACES PER STEP)

D3560-042 ARM WELDMENT

D3560-044 ARM WELDMENT

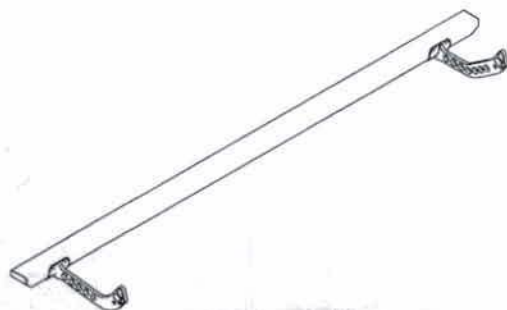
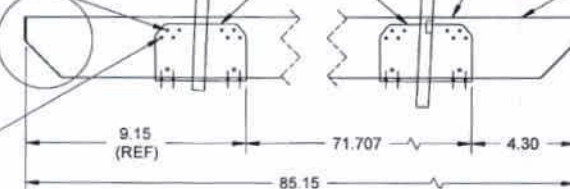
D3562-1, MAKE FROM EXTRUSION D2622

2) APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS



REFER TO STEP END DETAIL

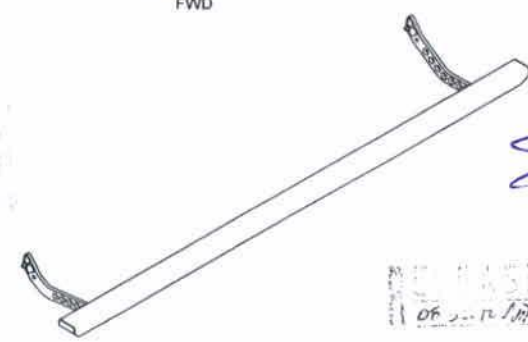
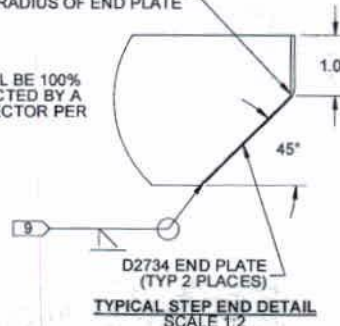
INSTALL MS20600AD4W5 RIVET (32 PLACES PER STEP)



**D3562-041 LH STEP ASSEMBLY**

ROUND CORNER OF EXTRUSION TO MATCH BEND RADIUS OF END PLATE

NOTE: ALL WELDS SHALL BE 100% VISUALLY INSPECTED BY A QUALIFIED INSPECTOR PER DART QSI 004



**D3562-042 RH STEP ASSEMBLY**

**NOTES:**

1) MATERIAL: N/A  
2) FINISH:

- i) CHEMICAL CONVERSION COAT STEP EXTRUSION PER DART QSI 005 4.1 BEFORE ASSEMBLY
- ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 8.79 lbs
- 8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.
- 9) WELDING: PER DART QSI 004

QTY -041	QTY -042	P/N	DESCRIPTION
X		D3562-041	LH STEP ASSEMBLY
	X	D3562-042	RH STEP ASSEMBLY
1		D3560-041	ARM WELDMENT
	1	D3560-042	ARM WELDMENT
1		D3560-043	ARM WELDMENT
	1	D3560-044	ARM WELDMENT
32	32	MS20600AD4W5	RIVET
2	2	D2734	END PLATE

E	ADD QTY (2) TO D2734 END PLATE ON D3562-042	PH	08.01.11
D	REMOVE D2808 SPACER NOTE: REDRAWN IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2808, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV	DESCRIPTION	BY	DATE
DESIGN	DP		
DRAWN	RP		
CHECKED	LE		
MFG. APPR.	DP		
APPROVED	DP		
DE APPR.	DP		
DATE	08.01.11		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3562  
REV. E  
SHEET 1 OF 1  
SCALE 1:5

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